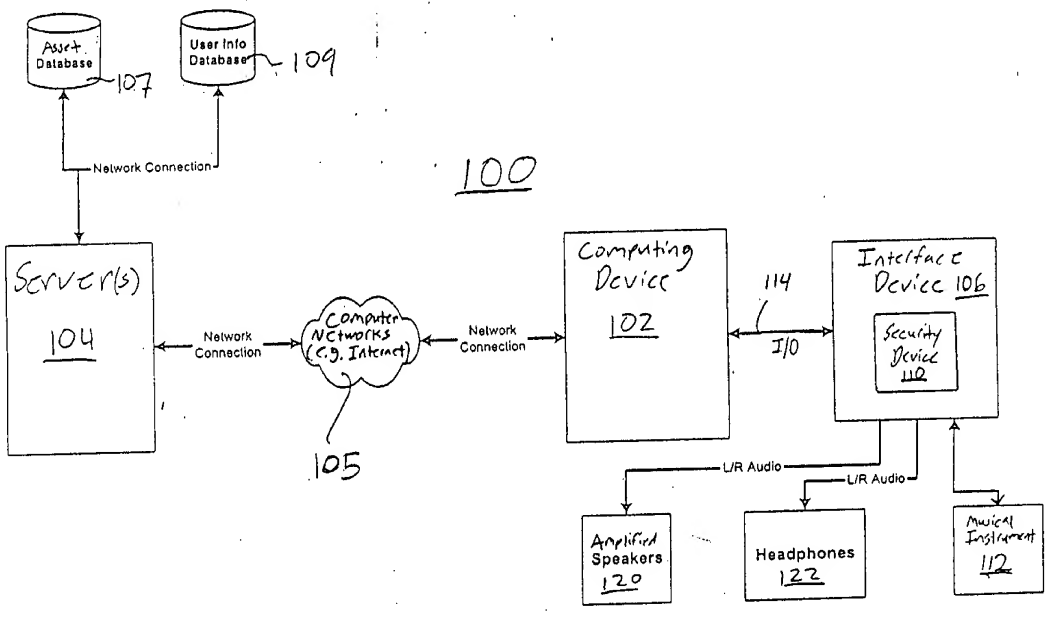
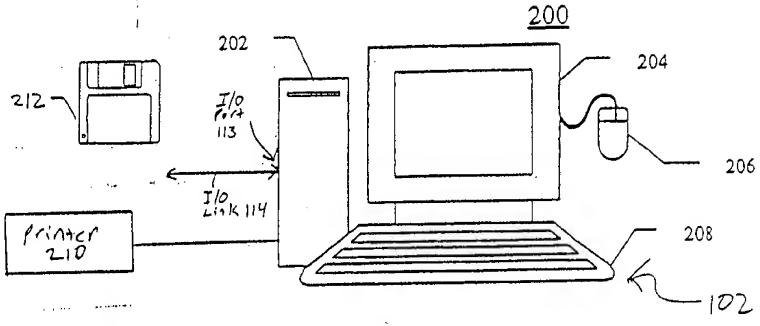


Figure 1

Figure 2a



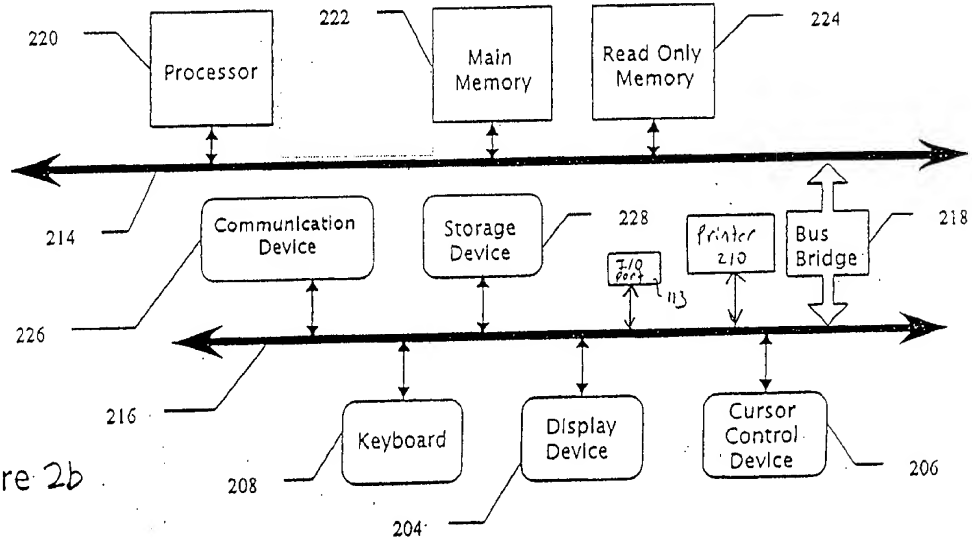
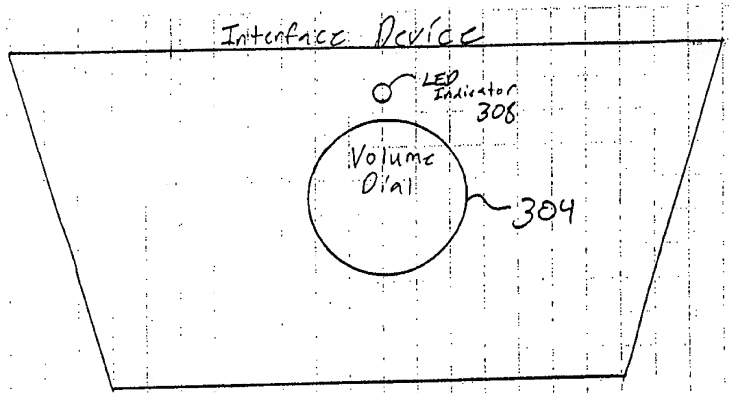


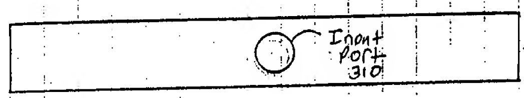
Figure 2b

106



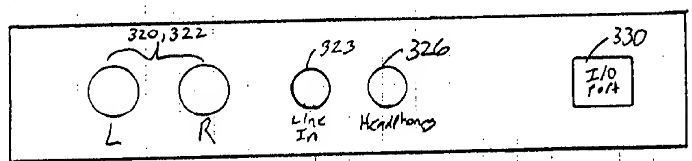
Top View

Figure 3a



Front View

Figure 3b



Back View

Figure 3c

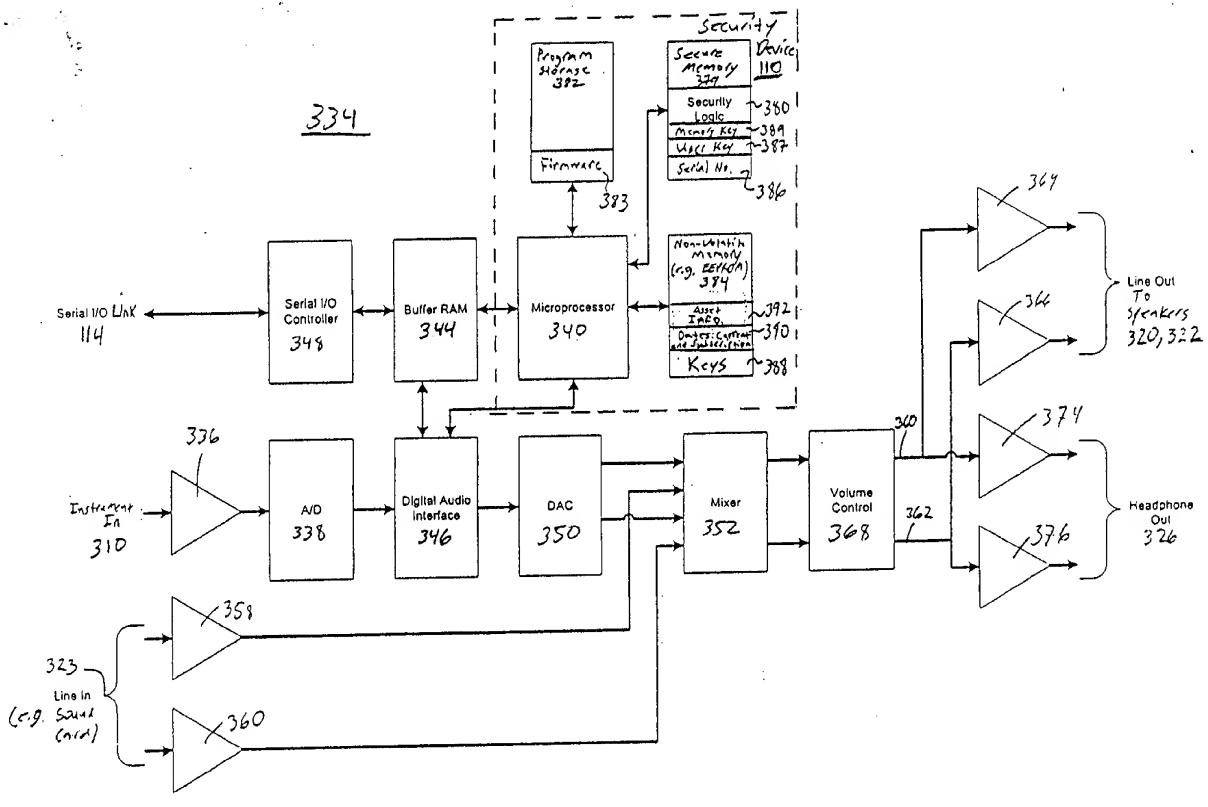

334
Security Device 110
Program Storage 382
Firmware 383
Secure Memory 379
Security Logic 380
Memory Key 389
User Key 387
Serial No. 386
Non-Volatile Memory (e.g. EEPROM) 384
Asset Info 392
Device Configuration 390
Keys 388
Serial I/O Link 114
Serial I/O Controller 348
Buffer RAM 344
Microprocessor 340
Instrument In 310
336
A/D 338
Digital Audio Interface 346
DAC 350
Mixer 352
Volume Control 368
360
362
364
366
374
376
Line Out To Speakers 320, 322
Headphone Out 326
358
360
323
Line In (e.g. Sound Card)

Figure 3d

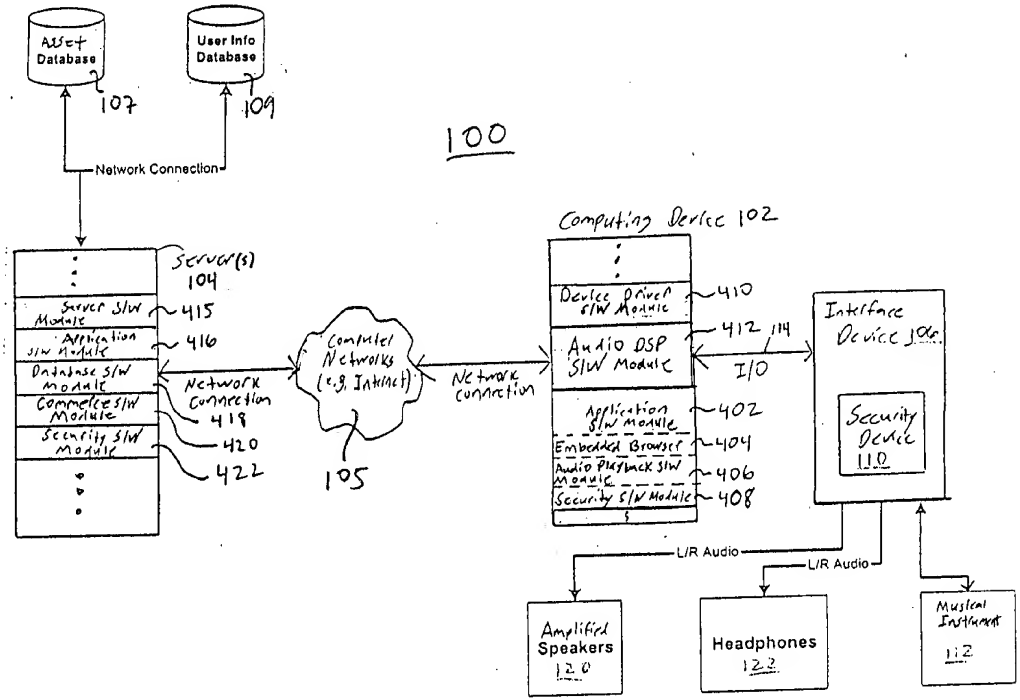


Figure 4

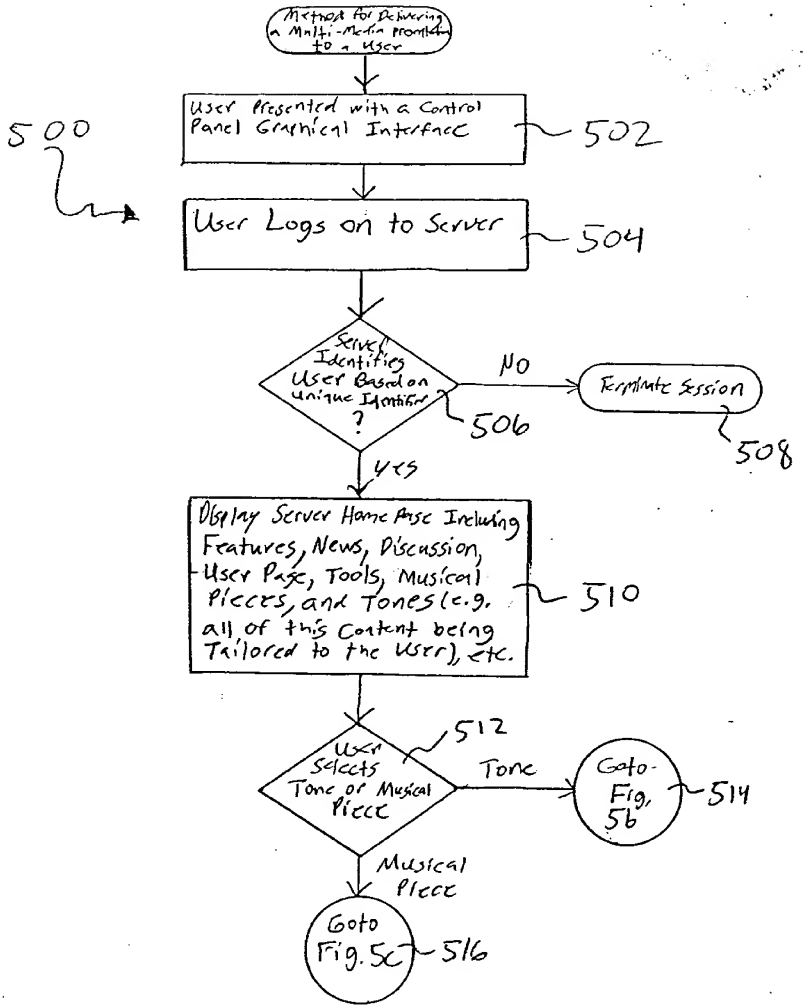

Method for Delivering a Multi-Media product to a User
500
User Presented with a Control Panel Graphical Interface
502
User Logs on to Server
504
Server Identifies User Based on unique Identifier ?
506
No
Terminate Session
508
Yes
Display Server Home Page Including Features, News, Discussion, User Page, Tools, Musical Pieces, and Tones (e.g. all of this Content being Tailored to the User), etc.
510
User Selects Tone or Musical Piece
512
Tone
Goto Fig. 5b
514
Musical Piece
Goto Fig. 5c
516

Figure 5a

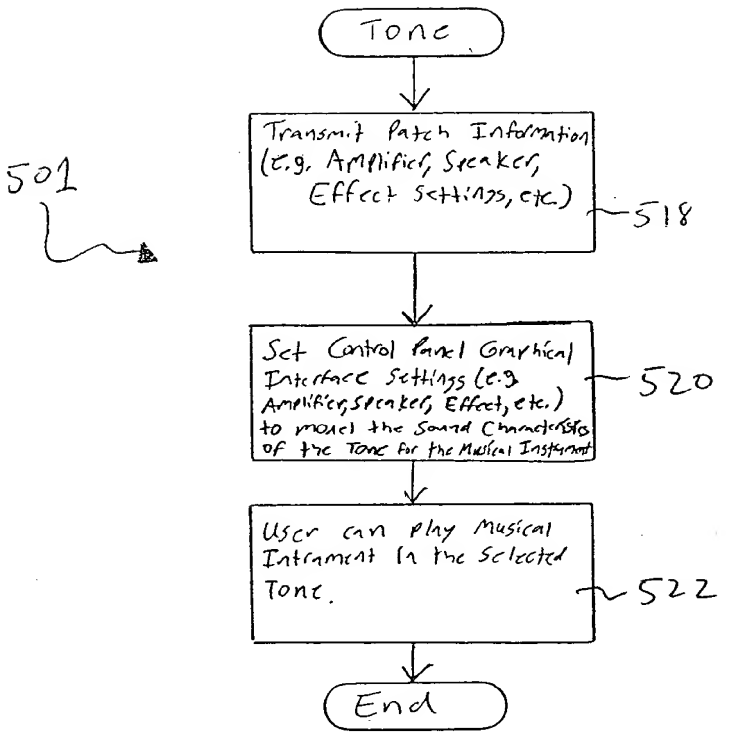

Tone
Transmit Patch Information (e.g. Amplifier, Speaker, Effect Settings, etc.)
518
501
Set Control Panel Graphical Interface Settings (e.g. Amplifier, Speaker, Effect, etc.) to model the Sound Characteristics of the Tone for the Musical Instrument
520
User can play Musical Instrument in the Selected Tone.
522
End

Figure 5b

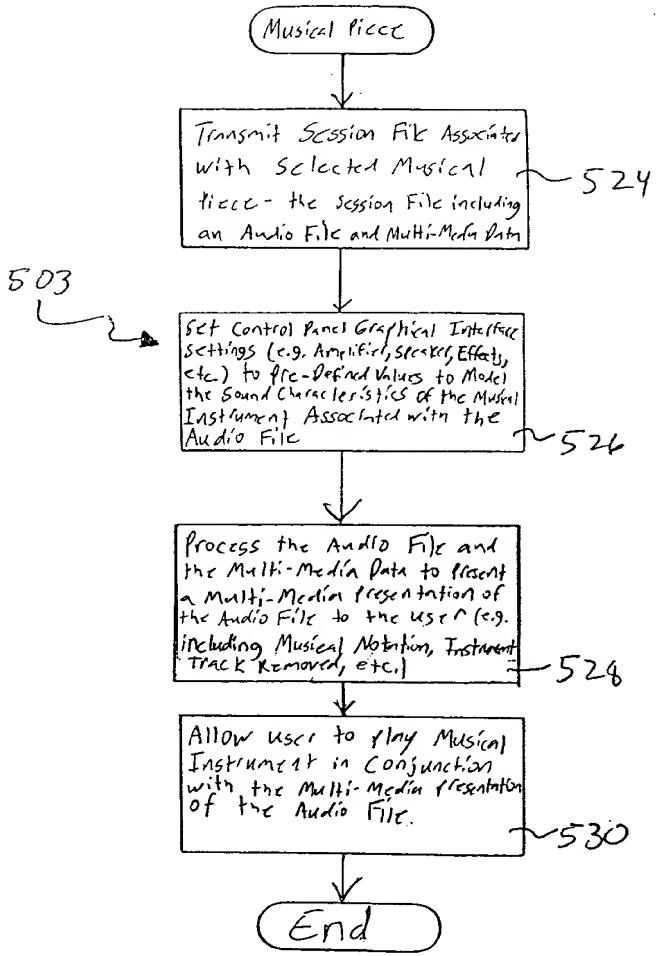

Musical Piece
Transmit Session File Associated with Selected Musical Piece - the Session File including an Audio File and Multi-Media Data
524
503
Set Control Panel Graphical Interface Settings (e.g. Amplifier, Speaker, Effects, etc.) to Pre-Defined Values to Model the Sound Characteristics of the Musical Instrument Associated with the Audio File
526
Process the Audio File and the Multi-Media Data to Present a Multi-Media Presentation of the Audio File to the User (e.g. including Musical Notation, Instrument Track Removed, etc.)
528
Allow User to Play Musical Instrument in Conjunction with the Multi-Media Presentation of the Audio File.
530
End

Figure 5C

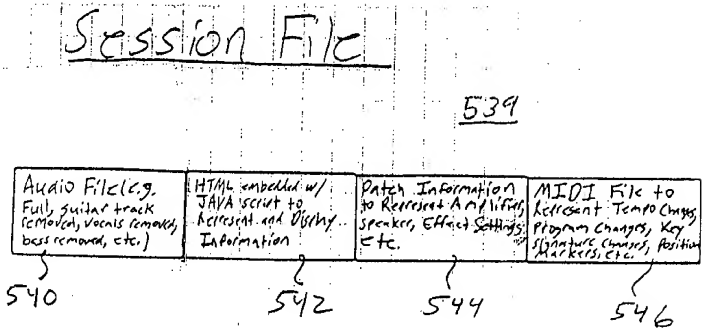

Session File
539
Audio File (e.g. Full, guitar track removed, vocals removed, bass removed, etc.)
HTML embedded w/ JAVA script to represent and display Information
Patch Information to Represent Amplifier, Speaker, Effect Settings, etc.
MIDI File to represent Tempo Changes, Program Changes, Key Signature Changes, Position Markers, etc.
540
542
544
546

Figure 5d


GuitarPort
DRIVE
BASS
MIDDLE
TREBLE
PRESENCE
VOLUME
BOOST
Amp Based On:
Cab Based On:
TIME
FEEDBACK
LEVEL
HELP

Figure 6a'

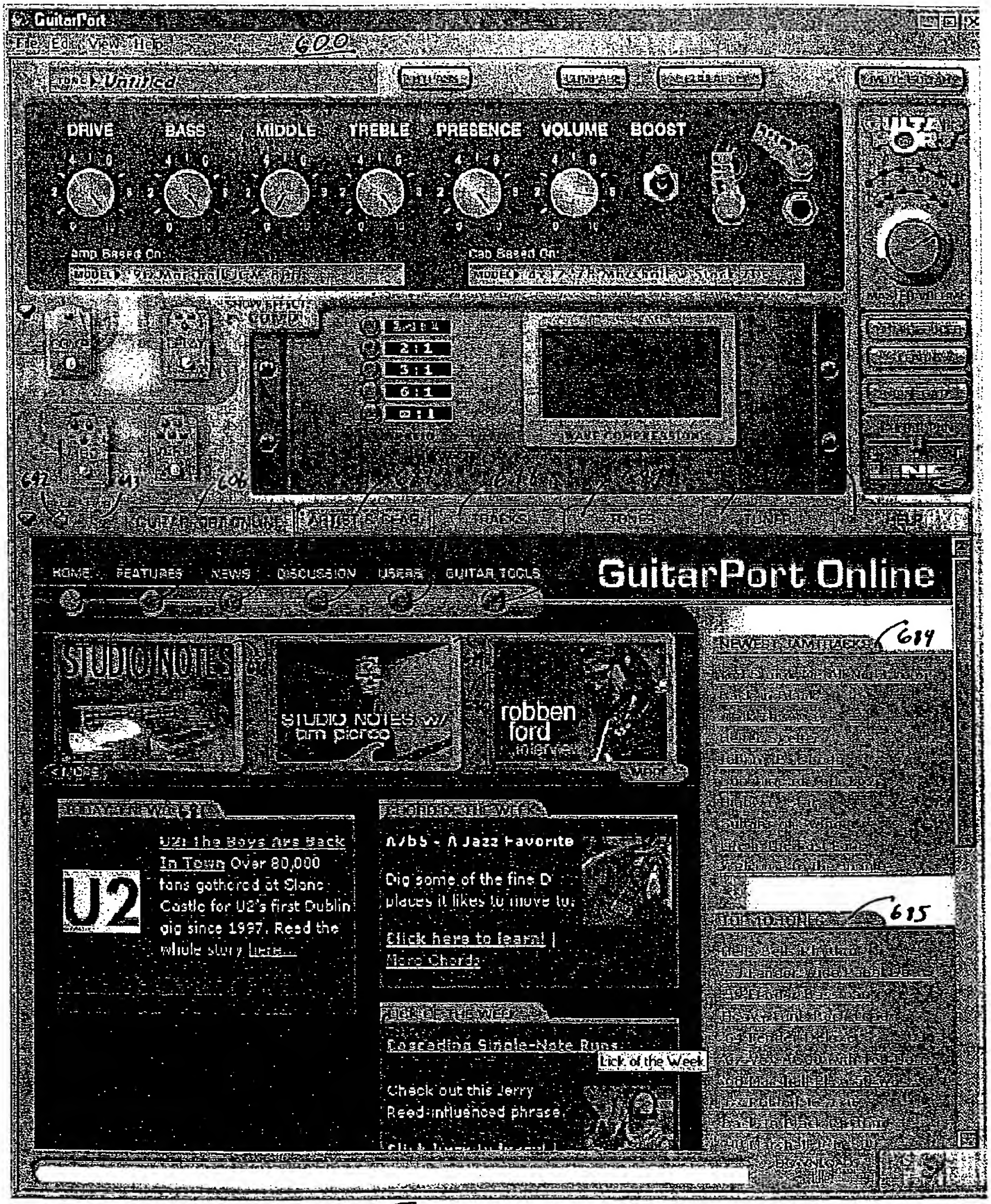

GuitarPort
File Edit View Help
600
Untitled
DRIVE
BASS
MIDDLE
TREBLE
PRESENCE
VOLUME
BOOST
Amp Based On:
Cab Based On:
2:1
3:1
6:1
WAVE COMPRESSION
642
643
606
GUITARPORT ONLINE
ARTIST & GEAR
TRACKS
TONES
TUNER
HELP
HOME
FEATURES
NEWS
DISCUSSION
USERS
GUITAR TOOLS
GuitarPort Online
STUDIO NOTES
STUDIO NOTES w/ tim pierce
robben ford
NEWEST JAM TRACKS
614
U2
U2: the Boys Are Back In Town Over 80,000 fans gathered at Slane Castle for U2's first Dublin gig since 1997. Read the whole story here...
A7b5 - A Jazz Favorite
Dig some of the fine D places it likes to move to:
Click here to learn! | More Chords
615
Cascading Single-Note Runs
Lick of the Week
Check out this Jerry Reed-influenced phrase.

Figure 6b

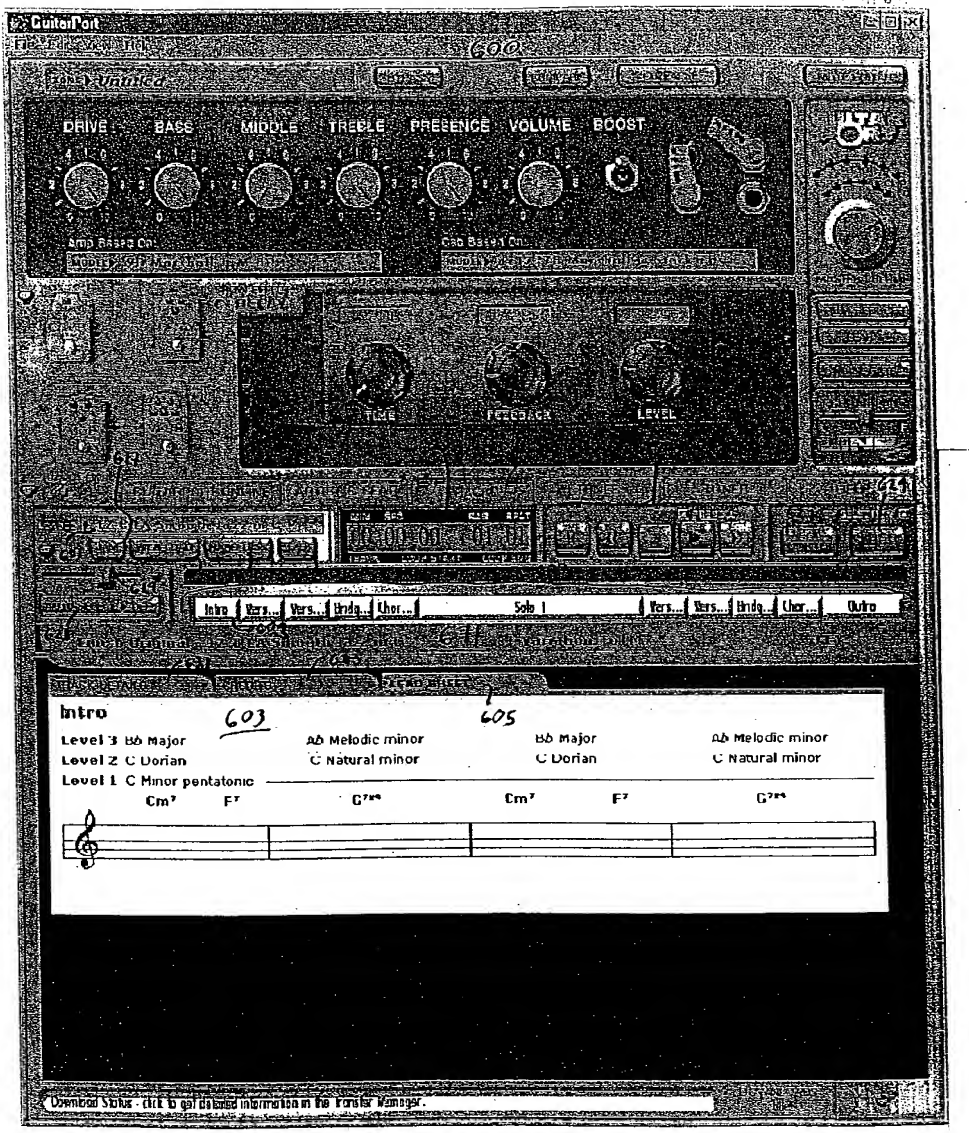


Figure 6C

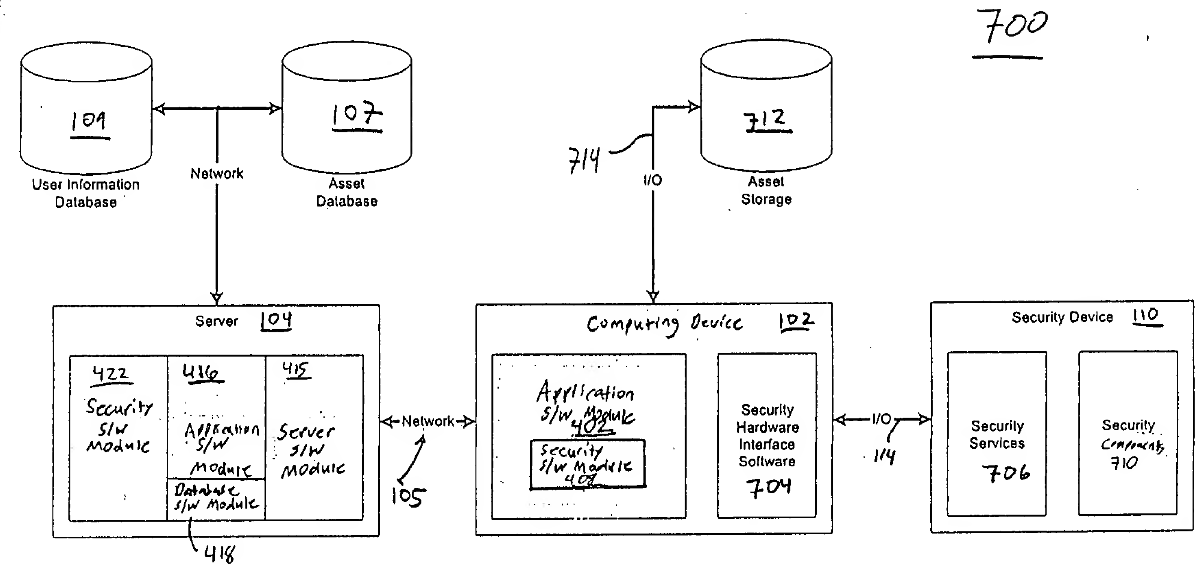

700
109
User Information Database
Network
107
Asset Database
714
I/O
712
Asset Storage
Server 104
422
Security S/W Module
416
Application S/W Module
Database S/W Module
418
415
Server S/W Module
Network
105
Computing Device 102
Application S/W Module 402
Security S/W Module 408
Security Hardware Interface Software
704
I/O
114
Security Device 110
Security Services
706
Security Components
710

Figure 7a

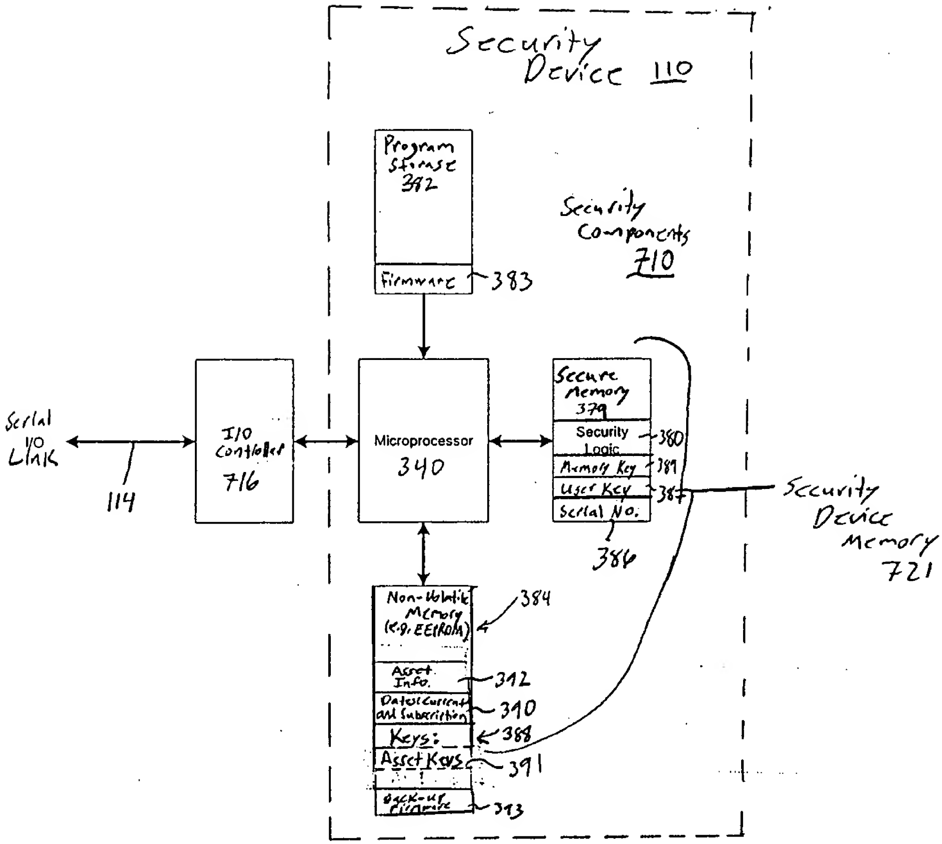

Security Device 110
Program Storage 382
Firmware
383
Security Components 710
Serial I/O Link
114
I/O Controller 716
Microprocessor 340
Secure Memory 379
Security Logic
380
Memory Key
389
User Key
387
Serial No.
386
Security Device Memory 721
Non-Volatile Memory (e.g. EEPROM)
384
Asset Info.
392
Date/Current and Subscription
390
Keys:
388
Asset Keys
391
Back-up Firmware
393

Figure 7b

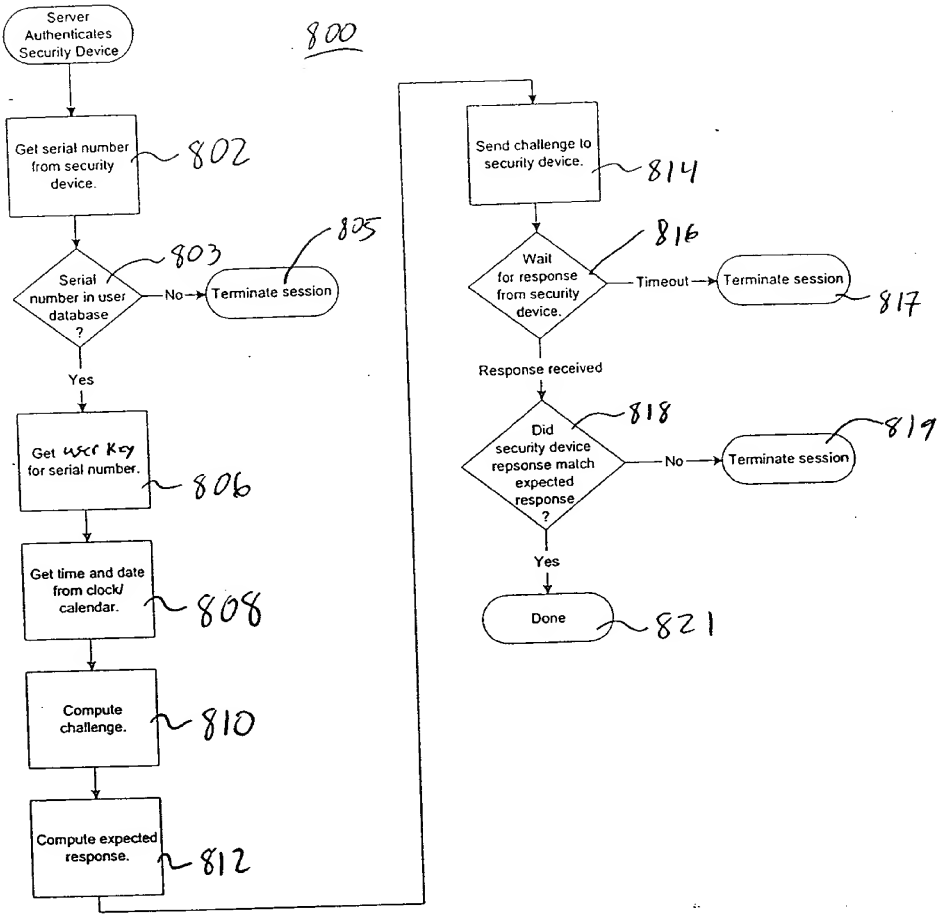

800
Server Authenticates Security Device
Get serial number from security device.
802
Serial number in user database ?
803
No
Terminate session
805
Yes
Get user Key for serial number.
806
Get time and date from clock/ calendar.
808
Compute challenge.
810
Compute expected response.
812
Send challenge to security device.
814
Wait for response from security device.
816
Timeout
Terminate session
817
Response received
Did security device repsonse match expected response ?
818
No
Terminate session
819
Yes
Done
821

Figure 8a

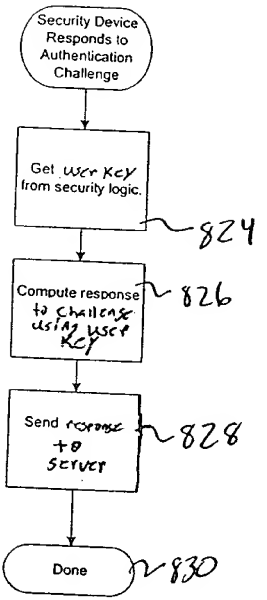

Security Device Responds to Authentication Challenge
822
Get User Key from security logic.
824
Compute response to challenge using User Key
826
Send response to server
828
Done
830

Figure 8b

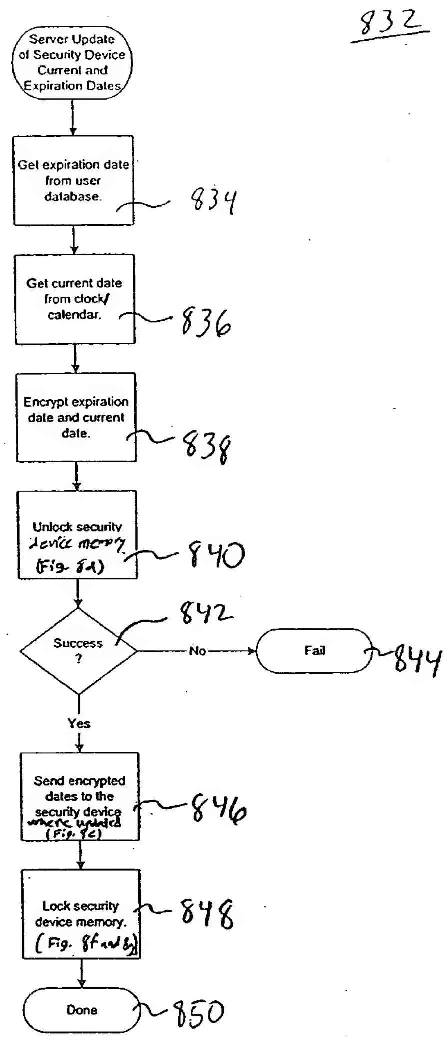


Figure 8c

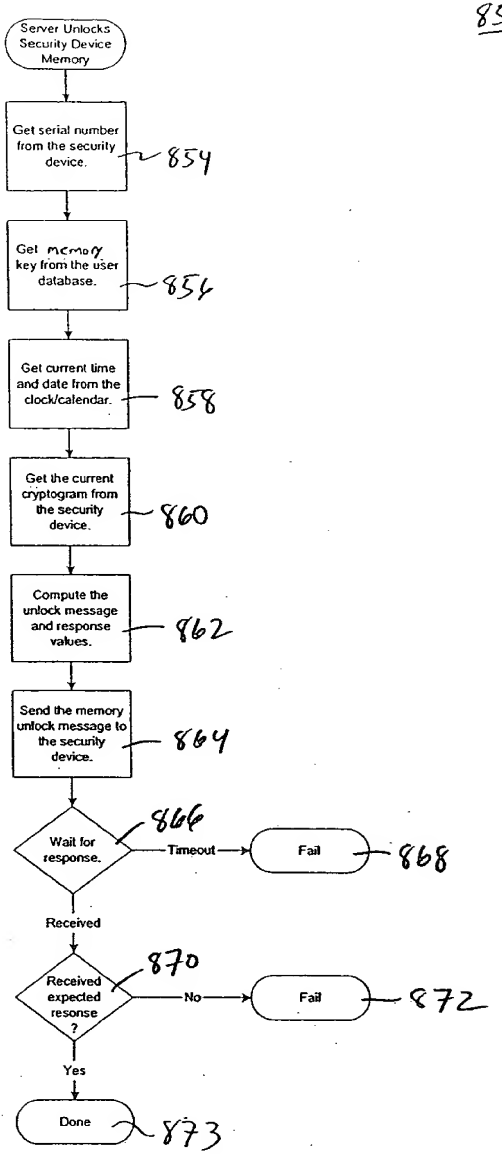

852
Server Unlocks Security Device Memory
Get serial number from the security device.
854
Get memory key from the user database.
856
Get current time and date from the clock/calendar.
858
Get the current cryptogram from the security device.
860
Compute the unlock message and response values.
862
Send the memory unlock message to the security device.
864
Wait for response.
866
Timeout
Fail
868
Received
Received expected resonse ?
870
No
Fail
872
Yes
Done
873

Figure 8d

674

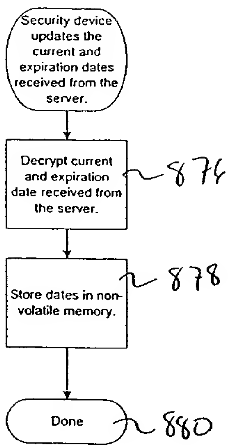


Figure 8c

882

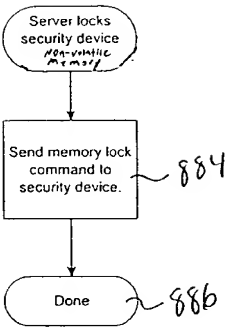


Figure 8f

888

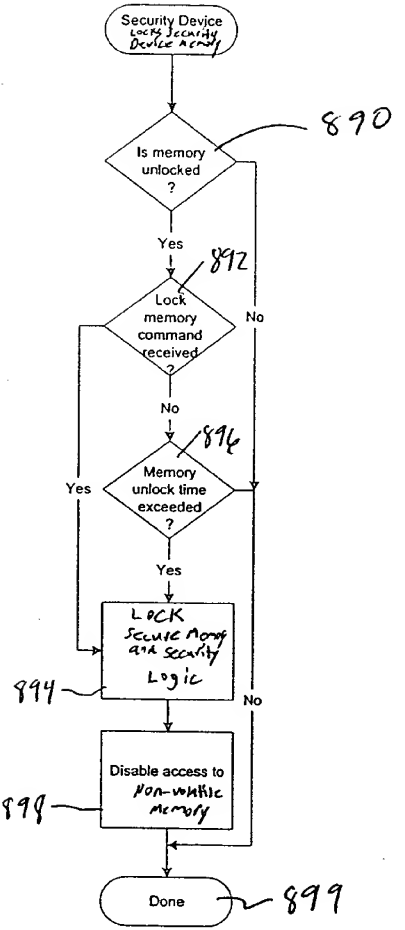


Figure 8s

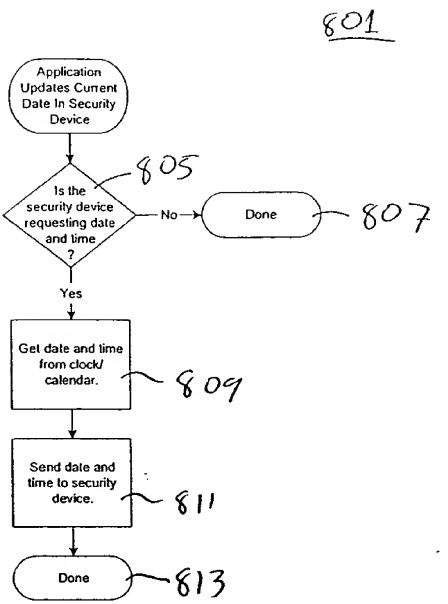

801
Application Updates Current Date In Security Device
805
Is the security device requesting date and time ?
No
Done
807
Yes
Get date and time from clock/ calendar.
809
Send date and time to security device.
811
Done
813

Figure 8h

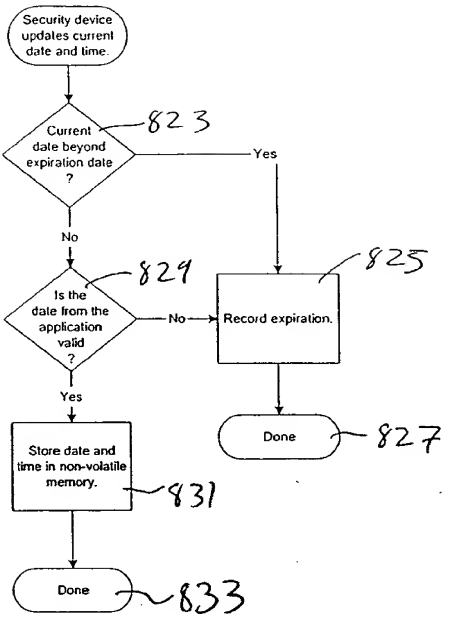

815
Security device updates current date and time.
Current date beyond expiration date ?
823
Yes
No
Is the date from the application valid ?
829
No
Record expiration.
825
Yes
Done
827
Store date and time in non-volatile memory.
831
Done
833

Figure 8i

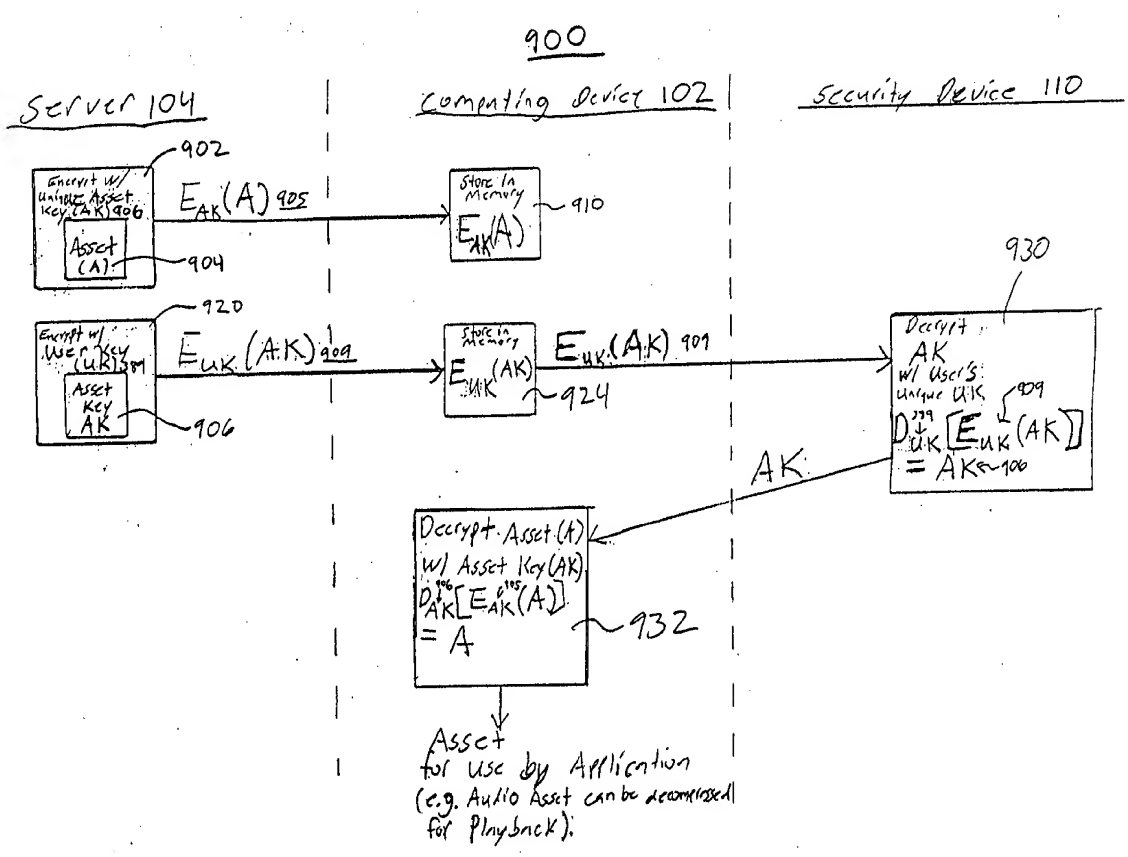

900
Server 104
Computing Device 102
Security Device 110
902
Encrypt w/ Unique Asset Key (AK) 906
Asset (A) 904
$E_{AK}(A)$ 905
Store in Memory
$E_{AK}(A)$
910
920
Encrypt w/ User Key (UK) 908
Asset Key AK 906
$E_{UK}(AK)$ 909
Store in Memory
$E_{UK}(AK)$
924
$E_{UK}(AK)$ 909
930
Decrypt AK w/ User's Unique UK
$D^{939}_{UK}[E_{UK}(AK)]$
= AK 100
AK
Decrypt Asset (A) w/ Asset Key (AK)
$D^{906}_{AK}[E^{905}_{AK}(A)]$
= A
932
Asset for use by Application (e.g. Audio Asset can be decompressed for Playback).

Figure 9

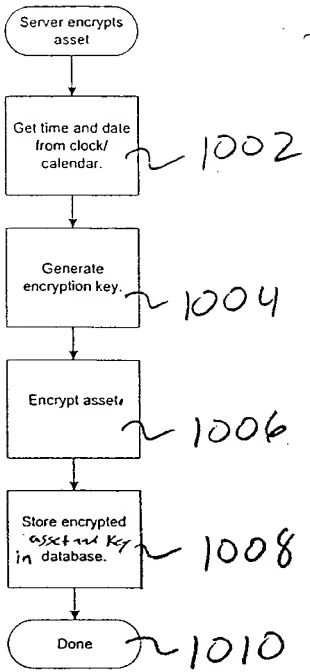

1000
Server encrypts asset
Get time and date from clock/ calendar.
1002
Generate encryption key.
1004
Encrypt asset.
1006
Store encrypted asset and key in database.
1008
Done
1010

Figure 10a

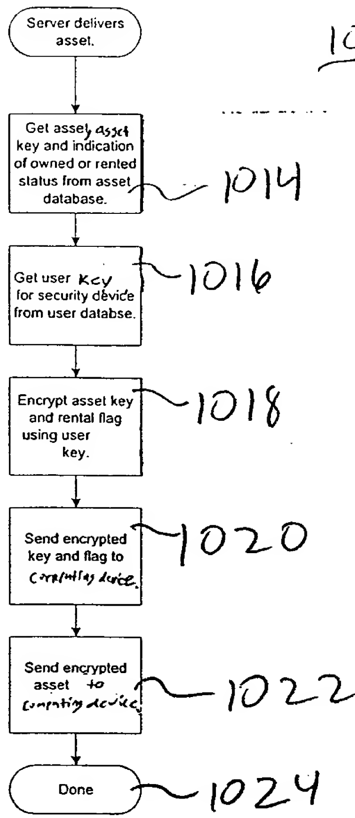


Figure 10b

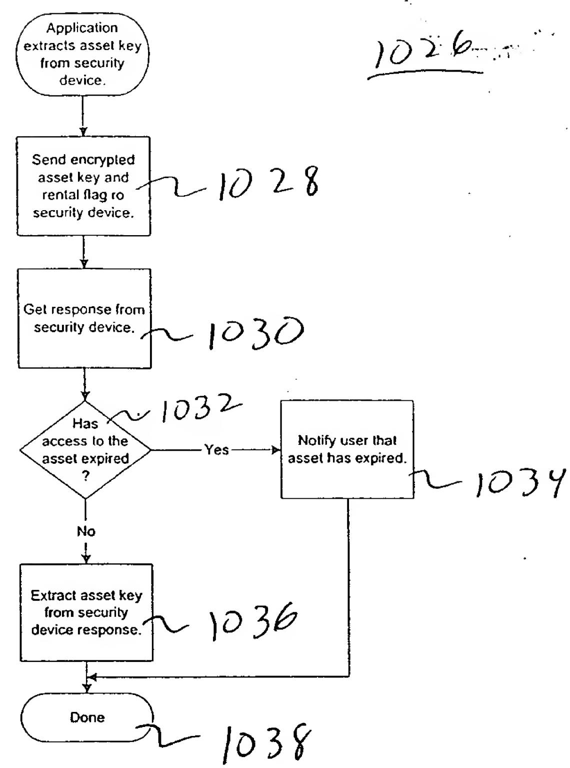

1026
Application extracts asset key from security device.
Send encrypted asset key and rental flag ro security device.
1028
Get response from security device.
1030
1032
Has access to the asset expired ?
Yes
Notify user that asset has expired.
1034
No
Extract asset key from security device response.
1036
Done
1038

Figure 10c

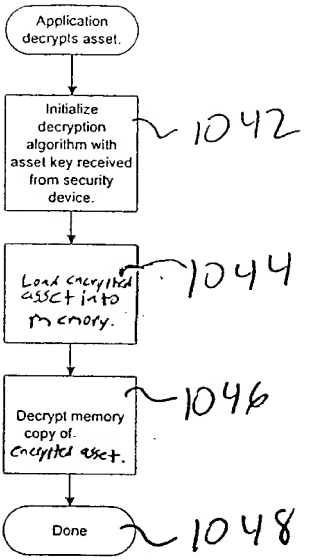

1040
Application decrypts asset.
Initialize decryption algorithm with asset key received from security device.
1042
Load encrypted asset into memory.
1044
Decrypt memory copy of encrypted asset.
1046
Done
1048

Figure 10d

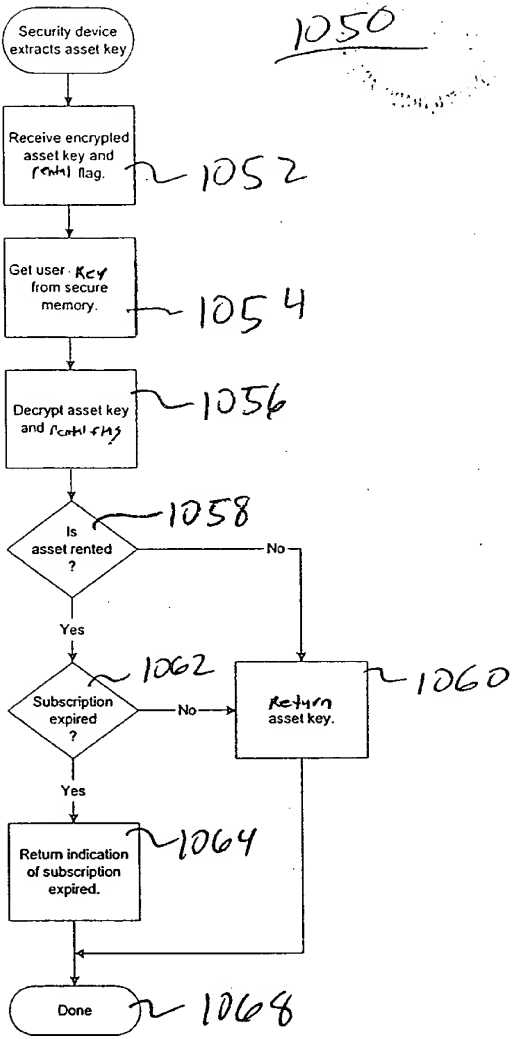


Figure 10c